



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,528	-03/29/2004	Arthur Berman	356508.02001	3305

7590 11/03/2005  
Reed Smith LLP  
P.O. Box 7936  
San Francisco, CA 94120-7936

EXAMINER  
MACK, RICKY LEVERN

ART UNIT 2873	PAPER NUMBER
------------------	--------------

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/812,528	Applicant(s) BERMAN, ARTHUR	
	Examiner Ricky L. Mack	Art Unit 2873	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13, 26, 31 and 38-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 26, 31 and 38-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0205</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> .                  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I, in the reply filed on 8/17/05 is acknowledged.
2. Non-elected claims 14-25, 27-30 and 30-37 have been canceled.

### *Claim Objections*

3. Claims 1 and 7 are objected to because of the following informalities: In claims 1, "quater" should "quarter"; and in claim 1 and 7, the quotes should be removed.

Appropriate correction is required.

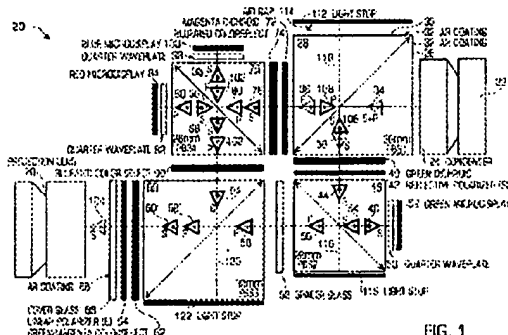
### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-13, 26, 31 and 38-55 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Berman et al. (2003/0227680 A1).



6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-13, 26, 31 and 38-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (2003/0227680 A1)

Chen discloses, as in claims 1-13, 26, 31 and 38-55, an optical device (see figures 16 and 17; paragraphs 0124-0128) comprising a light source, polarizing beamsplitters (306, 308, 316, 324), and  $\frac{1}{4}$ -wave plates (312, 328, 332) adjacent to a respective microdisplay (310, 326, 330) wherein a set of optics configured to break an input light beam into component color light beams, direct each component color light beam to a corresponding modulation device for modulation, and recombine the modulated component light beams into an output beam containing an image according to an energization of the modulation devices; and at least one a quarter waveplate inserted in at least one of the component color light beams and oriented such that a principle axis of the at least one quarter waveplate is aligned parallel to an axis of linear polarization of the component color light beam incident thereto; wherein the modulation device corresponding to the at least one component color light beam is oriented at an angle  $\theta$  such that an optical "axis" of the microdisplay is optimally oriented for residual retardation compensation with respect to the linearly polarized light input to the microdisplay from the quarter waveplate. Applicant's claims contain functional language, which does not distinguish from the Chen, and the examiner takes the position that the claimed function language

Art Unit: 2873

is inherent to the structure disclosed by Chen. Applicant should provide specific claimed structure relied upon to overcome this rejection using Chen.

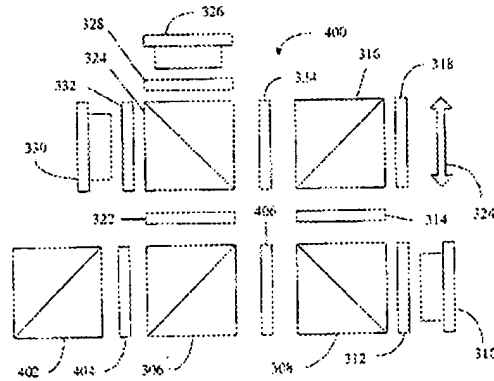


FIG. 17

8. Claims 12 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by O'Connor et al. (6672722 B2).

O'Connor discloses, as in claim 12, a microdisplay package, comprising: a microdisplay (34) having an optical axis; a quarter waveplate (33) coupled to the microdisplay.

O'Connor discloses, as in claim 13, wherein the quarter waveplate is cut such that a principle axis of the quarter waveplate is parallel to the optical axis of the microdisplay (see fig. 2).

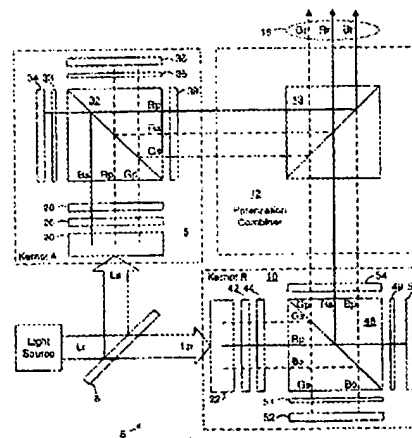


Fig. 2


*Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited for disclosing an optical device comprising a beamsplitter, quarter-wave plate and microdisplay of the same field of endeavor: Lee (5575548), Hall, Jr. et al. (6757710 B2) and Chen et al. (2004/0136067 A1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky L. Mack whose telephone number is (571) 272-2333. The examiner can normally be reached on Monday-Friday (6:30 AM to 4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ricky L Mack  
Primary Examiner  
Art Unit 2873

RM  
October 30, 2005